Fowler (G. R.)

Explorative Laparotomy.

BY

GEORGE R. FOWLER, M. D.,

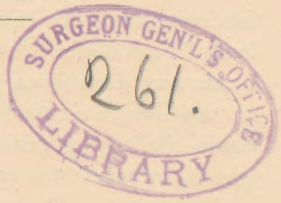
SURGEON TO ST. MARY'S GENERAL HOSPITAL, BROOKLYN.

REPRINTED FROM

The New York Medical Journal

for January 2, 1886.

Reprinted from the New York Medical Journal for January 2, 1886.



EXPLORATIVE LAPAROTOMY.*

By GEORGE R. FOWLER, M.D.,
SURGEON TO ST. MARY'S GENERAL HOSPITAL, BROOKLYN.

Upon the occasion of a recent visit to this country of that prince of laparotomists, Mr. Lawson Tait, he was asked by Professor Lusk to give an opinion regarding the nature of an obscure abdominal and pelvic growth, about which but one thing seemed certain, and that, its evident agency in rapidly bringing to a close the patient's life. He replied, with his characteristic but practical readiness, "Cut the patient open and find out." Professor Lusk acted upon this rather bluntly expressed counsel, and, following the explorative operation by a hysterectomy, succeeded in snatching the patient from the very brink of the grave and restoring her to her family and friends. That this advice is not at all inconsistent with the common practice of the noted Birmingham surgeon I can testify from a personal observation of his work last year, both at his private hospital and in the operating theatre of the Birmingham Hospital for Women.

Although the words grate harshly upon timid ears, and at first bring up thoughts of a bloody and difficult opera-

* The Address of the Chairman of the Surgical Committee of the Medical Society of the County of Kings, delivered October 20, 1885.

tion, together with visions of peritonitis, and perhaps a death for which the operator may be held accountable even by his own conscience, yet they are the words of a man thoroughly conscientious in all that he says and does—words challenging criticism and inviting attention in this age of progress in the surgical world.

What surgeon has not, in the days, it is to be hoped, now rapidly passing away, when brought face to face with some grave intra-peritoneal condition demanding a positive diagnosis, which latter must almost necessarily be based upon objective symptoms—and while palpating and percussing, concentrating his thoughts upon the "*tactus eruditus*," in a great measure groping in the dark—felt the thought come uppermost in his mind: "If I only had my fingers inside!" But, no, he has been taught that to break down this barrier between a guess and a certainty would be folly but little short of criminality, and he rises from the bedside of the patient with a "provisional" diagnosis upon his lips and a tentative course of treatment in his mind. Or, if, perchance, he suggests the only way of clearing up the case, he is looked upon as being visionary, mayhap an unsafe man to be at large in the community.

But, thanks to the enthusiasm and zeal, tempered with a conscientious desire to arrive at the truth, of such men as Tait, coupled with the patient studies of men like Frederick Treves, to say nothing of the additional security afforded by the use of antiseptic measures, it is safe to say that, at no distant day, the folly will be on the side of the surgeon who does not "find out." But there is yet room for missionary work before men, and good men too, can be induced to come out of their shell of conservatism, so called, and with a bold front help to break down the prejudices and misgivings based upon an ill-founded fear of the peritonæum and its behavior under the knife. But the day is

happily dawning, and, from the hour when our own McDowell lifted his scalpel to strike off the fetters, all down through the years to the present, we have been coming to the light. Soon we shall shake off for ever our inthralldom, the rational outcome of an overpowering awe for the abdominal cavity and the sight of its contents in the living, breathing subject, and realize that true conservatism consists in conserving or preserving the lives of those intrusted to our keeping. By no better means can this be accomplished than by certainty in diagnosis; prompt measures of relief, in the hands of the true surgeon, will naturally follow, and this is none the less true, even though the former may involve the carrying out of the advice to "cut the patient open and find out"—advice based upon common sense, sound principles, and conviction, growing out of an exceptionally extensive and varying experience in the surgery of the abdomen.

It may be worth our while at this point, perhaps, to pause for a moment and study the causes which have led up to the present status of abdominal section, whether explorative or operative in the broader sense. In the case of the pioneer, McDowell, one must be struck by the existence of the two personal qualities—far-sightedness and courage—qualities indispensable to the course he had marked out for himself when entering upon a field of work then almost entirely unexplored, and deemed unjustifiably dangerous to the patient's life, and, in the event of failure, most disastrously damaging to the surgeon's reputation. But those very elements in his character which led him to foresee the possibility of a successful issue to his undertaking, and gave him the courage to make the attempt, likewise prompted him to throw around his patient every precaution. We may rest assured that each step of that operation was most carefully rehearsed in his mind, and during its

performance, although his instruments and appliances were simplicity itself, yet his careful forethought, the result of hours of study and preparation, had eminently fitted him to meet almost every contingency likely to arise. Who can say that he did not fully appreciate the advantages of approaching the patient with recently washed hands and instruments; or of having but one pair of hands, and those his own, enter the cavity of the abdomen; or of limiting his incision to the actual requirements of the case; or of leaving a clean and bloodless peritoneal cavity behind him? Even in the matter of the treatment of the pedicle it may be said that many a woman recovered from the operation of ovariotomy long after McDowell was gathered to his fathers, in whom the pedicle was treated as he treated it in his first patient. And, in those days of the so-called antiphlogistic regimen, what evidence have we that his after-treatment did not coincide with what Lawson Tait more than hinted to me constituted his sheet-anchor during the first three days after any operation involving the peritonæum—namely, to quote his own words: "A teaspoonful of hot water every half hour, and nothing else."

As we look down the long list of those who came after McDowell in the field of abdominal surgery, each one of whom contributed something toward its advancement, adding fresh victories and increasing the confidence of the public, both lay and professional, in its capabilities and resources, our wonder and admiration are excited when we behold what opposition these surgeons were compelled to contend with, and how utterly hopeless, it seemed at times, became the task of convincing even the leaders in our own profession of what a precious boon had been conferred upon humanity by the humble surgeon of Kentucky. We note, in addition, the steadily decreasing mortality in the hands of successive operators, until it is not an uncommon thing

to hear of a surgeon who has a run of a hundred cases of abdominal section, and not a death fairly attributable to the operation itself.

An attempt to analyze the methods of different operators, with a view of determining the conditions essential to success, discloses the fact of the existence of considerable diversity of opinion regarding these conditions. It is not incompatible with our inquiry into the advantages and merits of explorative laparotomy to consider the general subject of abdominal section, and whatever may influence, in the remotest degree, its success and failure, for the two are so indissolubly blended that whatever contributes to the well-being of the patient in the one case can not but be of advantage in the other. In pursuing our study of the subject, it will not be possible, in the space of time allotted me, to enter deeply into all the peculiar methods ascribed to different operators, or to illustrate the different standpoints from which individual operators view the essentials of success, and the importance attached by each to any particulur measure. We will consider, however, for a moment, the question of antisepsis in its relation to laparotomy in the hands of operators who achieve, in this operation, about the same general average of success year after year. In order to facilitate the inquiry it will be convenient to divide these operators into three classes: First, those who may be said to maintain in and about the operation but a relative cleanliness; second, those who make a point of preserving the most rigid cleanliness—so rigid, indeed, as to be quite analogous to antisepsis itself; and, third, those who practice antisepsis more or less complete in detail. Why, then, it may be asked, is it, with such a difference in respect to a feature of the operation, which, judging from its importance, now generally conceded in general surgery, would seem of the greatest importance here, that these operators meet with al-

most if not quite equally good results? It is not easy to formulate an answer to this question, but, in my judgment, we must look far beyond any one special feature of the operation as the key-stone to success, this probably holding good to a greater extent in abdominal section than in operations involving other parts of the body. And I further believe that what an operator loses by want of attention to one particular feature he makes up for by attention to other details upon which he lays more stress. Keith, by his most patient and careful cleansing and closing of the abdominal cavity, leaves but little chance for a septic condition to occur afterward. His exceedingly delicate manipulation and treatment of every tissue involved in the operation are likewise features noted and commented upon by those who have been fortunate enough to witness his operations. He, perhaps, more than any other operator, can afford to forego the employment of antiseptic precautions in abdominal surgery. Lawson Tait, who uses neither antisepsis nor even absolute cleanliness in the sense that Hegar is said to, but who, on the other hand, operates with such admirable celerity, and whose every movement is magician-like in its quickness and certainty, challenging the admiration, by these and his many ingenious and time-saving devices, of those who have made a pilgrimage to the field of his labors; exposing as he does the peritoneal surfaces as little as possible, and never allowing, save in the direst need, a hand other than his own to touch the parts involved in the operation; surrounded by a staff of nurses of his own training, and he a most exacting disciplinarian; and possessed of a self-confidence born of an immense experience—what need has such an operator of antisepsis when he has a record but little short of perfection? He simply dips his hands and instruments in water from the tap, dons an old blue cloth blouse which, from its appearance, looks as if it might have been worn by him at every

operation since the occasion of his maiden effort in surgery. From the moment he takes the scalpel in his hand he enjoins the most perfect silence on the part of those about him; this latter he insists upon in order that nothing may distract his attention for a single moment from the work before him. Hegar, again, may be cited as an instance of those who pursue a most stringent course of cleanliness in the same line of work, and who, it is said, with his drilled assistants, rendered almost absolutely perfect in point of purity by bathing and fresh, clean linen at each operation, and taking every possible precaution against infection, except the use of germicides, manages to bring enough other advantages to his aid to enable him to keep the mortality of abdominal surgery, in his hands, within very narrow limits. And, lastly, it can not be for a moment doubted, in spite of the above facts, that antisepsis has a place in abdominal surgery, as elsewhere; but it must be acknowledged that its influence has not been so decidedly felt there as in other fields. Nevertheless, there are a large number of surgeons who find it of advantage to employ germicides and antiseptics in abdominal surgery. It may be, perhaps, they do not possess the painstaking methods and delicate manipulation of a Keith, nor the magical dexterity and immense experience of a Lawson Tait, and may consider the iron regimen of a Hegar more difficult to follow than antisepsis itself. These surgeons are called upon, however, and needs must, upon occasion, perform operations involving the abdominal cavity; who, not wanting in ordinary dexterity and skill, yet not phenomenal in these attributes, still manage, by dint of care and a strict adherence to the principles of antiseptic surgery, to make as good showing as their more fortunately-placed and better-known brethren. I do not wish to be understood as suggesting that the germicide bath in which the instruments are placed can compensate for want

of skill in the wielding thereof; that the spray of carbolic-acid solution playing over the site of operation will justify rough manipulation; nor that the results of gross carelessness and bungling manœuvres of an incompetent operator can be hidden away, never to be heard of again, beneath the folds of an elaborate gauze and mackintosh dressing. Far from it. Success in the surgery of the abdomen, other things being equal, seems to consist in and depend upon carrying to definite lengths carefully matured plans and purposes. Failure may result, not from a disregard for this, that, or the other special feature of the operative procedure, but from an absence of a sufficient number of redeeming or compensating circumstances to make up the sum-total constituting success.

In the study of the subject of explorative laparotomy it will be convenient for us to divide the cases calling for its performance into four classes, as follows: 1. Cases in which a diagnosis can not be made without opening the abdomen and exposing the parts to the direct touch, or even perhaps to the sight, of the surgeon, but in which further interference is thereby shown to be either impracticable or uncalled for. 2. Cases in which a provisional diagnosis only can be made, unaided by abdominal incision, and in which but slight additional risk is incurred by an immediate and radically curative procedure, based upon the knowledge thus gained. 3. Cases in which a diagnosis has been made, but in which doubt exists as to the practicability of performing a radical operation; and cases in which the choice of the particular operation best adapted to the individual case must be decided upon after incision and exploration. 4. Cases in which the patient's life is in imminent peril, and in which it becomes imperatively necessary to at once locate the lesion threatening life, and to be prepared to act promptly upon the knowledge gained by opening the ab-

dominal cavity. In Class 1 I have grouped those cases which begin and end as cases of pure explorative laparotomy, or, at all events, if benefit is derived from the exploration, it is not due to any design of the operator. This includes those cases of severe pelvic and abdominal pain in which no diagnosis can be made, and in which the persistency of the symptoms leads to a suspicion of some chronic ovaritis or salpingitis, with or without exudation or suppuration and retention of fluid in the Fallopian tubes. These cases are not always easily diagnosticated, but an incision will clear up many cases. The laparotomy, however, after patient and careful search, may in many instances reveal nothing to account for the symptoms, but the patient, strange to say—although nothing but a simple exploration, with the finger, or perhaps the hand, in the abdominal cavity, has been done—upon recovering from the operation finds herself free from pain which, prior to the operation and at intervals, perhaps, for years, had tormented her. The improvement in this class of cases, though in some instances indubitable, is very difficult to account for. Several explanations may be offered, such as the breaking down of slight and inappreciable adhesions between the parietal and visceral peritoneal surfaces by the sweeping around of the finger or hand in the abdominal cavity, the moral effect of the operation, and, finally, the enforced lying in bed in the recumbent position. It is not unlikely that any one or all of these circumstances may influence the result. To this class also may be assigned those cases of recurring ascites of obscure origin in which a diseased condition of the peritonæum is suspected; and, lastly, cases of peritonitis of evident traumatic origin, in which incision is made and drainage supplements the otherwise purely explorative operation.

In Class 2, a partial diagnosis having been made, and it being evident that something must be done for the patient's

relief—and, further, that opening the abdominal cavity will lead the way for a definite diagnosis, and, in addition, in all probability secure a radical cure with but slight additional risk—the surgeon is justified in taking the responsibility of an explorative laparotomy. As illustrative of this class of cases, the condition previously mentioned as chronic ovaritis, or salpingitis, with or without hydro- or pyo-salpinx, may be cited. In some of these cases, although attended with considerable difficulty in making a positive diagnosis, yet the suspicion amounts almost to a certainty. Here an opening sufficiently large to admit the introduction of the index-finger will clear up the doubt, and a skillful operator can remove the uterine appendages through the same incision. In like manner can be definitely diagnosed diseased conditions of the vermiform appendix, perforations, etc. In these cases, in which the diagnosis is only tolerably certain, ligature, or Lembert's suture, above the seat of disease or perforation, and a removal of this apparently useless portion of the alimentary canal, would then be indicated. It is no argument against explorative laparotomy in this class of cases to say that the adhesions limiting and walling in the seat of perforation and extravasation of fæcal matter would thereby be prevented from forming. An appeal to the statistics of peri- and para-typhlitis will reveal with what comparative rarity these adhesions occur; when they do take place the patient is still exposed to the danger following their rupture when abscess forms; when they do not form at once, oftentimes perforation, diffuse peritonitis, and, in consequence, certain death, is the rule. Here, then, is a class of cases in which the operation under consideration will, I venture to predict, prove the means of saving many lives.

Class 3 embraces mostly cases in which a diagnosis has been made, but in which doubt exists as to the practi-

cability of performing a radical operation. In this sense, perhaps, most cases of ovariotomy and hysterectomy may be looked upon as being, in a measure, explorative operations. Except in the hands of the most experienced operators, a positive knowledge beforehand as to the practicability of removing abdominal and pelvic growths is often impossible, and it is well always to make the incision as if for simple explorative purposes. It not infrequently happens that such an exploration will reveal a condition of affairs rendering it exceedingly hazardous, perhaps plainly impossible, to proceed further. Explorative laparotomy will also prove useful in cases, which may also be placed in this group, in which chronic intestinal obstruction occurs, and the question may arise regarding the propriety of attempting to relieve the obstruction after determining its location and nature. Resections of a portion of the gut or of the pyloric extremity of the stomach in stenosis at that point are instances in illustration. Cases of uterine fibroma of small and medium size, which, because of exhausting hæmorrhages, demand interference, will require a preliminary explorative operation before a choice can be made between simple removal of the appendages or a hysterectomy. In the generality of cases the former is practicable and sufficient, but cases are constantly occurring in which the choice will lie between performing the severer operation or closing the abdominal cavity without proceeding further.

Class 4 will probably tax the surgeon's skill and courage more than any of the other groups. Here we have to deal with a class of acute cases in which good judgment and prompt action are needed, else many lives may be unnecessarily sacrificed. Some of the most ingeniously devised operative measures for the relief of acute intestinal obstruction, gunshot wounds of the intestines, etc., have had their practicability established recently through the bold and in-

telligent performance of an explorative laparotomy. Symptoms leading to a suspicion of internal hæmorrhage, such as occurs from the ovarian pampiniform plexus, from sexual excitement, or at the menstrual molimen; or of perforation of intestine during typhoid fever, or under other circumstances; or rupture of the gall-bladder or urinary bladder; or rupture of an abscess, either hepatic, typhlitic, or pelvic, into the peritoneal cavity—symptoms pointing to either of these require careful analysis and prompt action, for delay is fraught with danger. A reasonable probability of the occurrence of any one of these accidents threatening the patient's life will demand an exploration of the cavity of the peritonæum; with the discovery of the lesion comes relief to the patient in many instances, and to the surgeon the consciousness of having done his whole duty.

As to the technique of the operation but little need be stated here. A scalpel and a pair of hæmostatic forceps would serve to make the way for the finger to pass into the abdominal cavity; and as the finger of the gynæcologist, as if by instinct, rapidly marks out the pelvic organs from the vagina in a methodical manner, so will the surgeon be able to appreciate, in the chronic cases at least, whatever can be brought within reach in the cavity of the peritonæum. In the acute cases mentioned in Class 4 a rather larger incision will be needed.

I can not help, in this connection, calling attention to a device, originating, I believe, with Mikulicz, by the employment of which much time may be saved, and greater certainty assured of discovering the seat of the lesion, in cases of intestinal perforation, strangulation, etc. It consists of selecting any portion of intestine coming readily within reach and giving it in charge of an assistant, who holds it firmly between layers of antiseptic gauze. The operator then proceeds, in a systematic manner, commencing on one

side of the assistant's thumb and finger, to examine carefully successive portions of the gut, until its termination in that direction is reached or the lesion discovered. Failing in this latter, he returns to the point of beginning, and in like manner, commencing at the other side of the point which the assistant's finger still holds securely, he finishes the exploration. Thus the search is pursued in a manner well calculated to attain its object and with the least exposure and handling of the parts.

I shall dismiss the subject of operative methods by stating my own preference for a rigid and systematic antisepsis, and by uttering my conviction that if "cleanliness is akin to holiness," then, in the same sense, antisepsis is heaven itself.

It has not been my design at this time to enter fully into the details of every condition and symptom demanding the operation of explorative laparotomy. My object has been rather to review the subject in a general way, and to enter a plea for its more frequent as well as earlier performance. Robbed as the operation is of most of its terrors by modern methods, holding out as it does a ray of hope in cases otherwise without hope, nothing short of a well-founded fear of the patient perishing upon the table should deter the surgeon, at least in the class of acute cases grouped in Class 4, from suggesting and urging, if necessary, its adoption. That the opening of the peritoneal cavity by a laparotomy will not always point a way to the relief of the condition threatening life, I know only too well. In my judgment, however, it were better to have met with a dozen cases in which the exploration only served to confirm the hopelessness of recovery rather than to have failed to interfere in a single instance and suffer the discomfiture of a post-mortem revelation showing a condition which could have been easily remedied by a single stroke of the knife.

REASONS WHY

Physicians should Subscribe

— FOR —

The New York Medical Journal,

EDITED BY FRANK P. FOSTER, M. D.,

Published by D. APPLETON & CO., 1, 3, & 5 Bond St.

1. **BECAUSE:** It is the *LEADING JOURNAL* of America, and contains more reading-matter than any other journal of its class.
2. **BECAUSE:** It is the exponent of the most advanced scientific medical thought.
3. **BECAUSE:** Its contributors are among the most learned medical men of this country.
4. **BECAUSE:** Its "Original Articles" are the results of scientific observation and research, and are of infinite practical value to the general practitioner.
5. **BECAUSE:** The "Reports on the Progress of Medicine," which are published from time to time, contain the most recent discoveries in the various departments of medicine, and are written by practitioners especially qualified for the purpose.
6. **BECAUSE:** The column devoted in each number to "Therapeutical Notes" contains a *résumé* of the practical application of the most recent therapeutic novelties.
7. **BECAUSE:** The Society Proceedings, of which each number contains one or more, are reports of the practical experience of prominent physicians who thus give to the profession the results of certain modes of treatment in given cases.
8. **BECAUSE:** The Editorial Columns are controlled only by the desire to promote the welfare, honor, and advancement of the science of medicine, as viewed from a standpoint looking to the best interests of the profession.
9. **BECAUSE:** Nothing is admitted to its columns that has not some bearing on medicine, or is not possessed of some practical value.
10. **BECAUSE:** It is published solely in the interests of medicine, and for the upholding of the elevated position occupied by the profession of America.

Subscription Price, $5.00 per Annum. Volumes begin in January and July.